



US 20060257852A1

(19) **United States**(12) **Patent Application Publication**
Rappuoli et al.(10) **Pub. No.: US 2006/0257852 A1**(43) **Pub. Date: Nov. 16, 2006**(54) **SEVERE ACUTE RESPIRATORY
SYNDROME CORONAVIRUS**(75) Inventors: **Rino Rappuoli**, Castelnuovo
Berardenga (IT); **Vega Massignani**,
Siena (IT); **Konrad Stadler**,
Scharnstein (AU); **Jens Peter
Gregersen**, Wetter (DE); **David Chien**,
Alamo, CA (US); **Jang Han**, Lafayette,
CA (US); **John M. Polo**, Danville, CA
(US); **Amy Weiner**, Fairfield, CA (US);
Michael Houghton, Danville, CA (US);
Hyun Chul Song, Berkeley, CA (US);
Mi-Young Seo, Yongin-si (KR); **John
Donnelly**, Moraga, CA (US); **Hans
Dieter Klenk**, Marburg (DE); **Nicholas
Valiante**, Fremont, CA (US)

Correspondence Address:

Chiron Corporation
Intellectual Property - R440
P.O. Box 8097
Emeryville, CA 94662-8097 (US)(73) Assignee: **Chiron Corporation**, Emeryville, CA(21) Appl. No.: **10/822,303**(22) Filed: **Apr. 9, 2004****Related U.S. Application Data**

(60) Provisional application No. 60/462,218, filed on Apr. 10, 2003. Provisional application No. 60/462,465, filed on Apr. 11, 2003. Provisional application No. 60/462,418, filed on Apr. 12, 2003. Provisional application No. 60/462,748, filed on Apr. 13, 2003. Provisional application No. 60/463,109, filed on Apr. 14, 2003. Provisional application No. 60/463,460, filed on Apr. 15, 2003. Provisional application No. 60/463,668, filed on Apr. 16, 2003. Provisional application

No. 60/463,983, filed on Apr. 17, 2003. Provisional application No. 60/463,971, filed on Apr. 18, 2003. Provisional application No. 60/464,899, filed on Apr. 22, 2003. Provisional application No. 60/464,838, filed on Apr. 22, 2003. Provisional application No. 60/465,273, filed on Apr. 23, 2003. Provisional application No. 60/465,535, filed on Apr. 24, 2003. Provisional application No. 60/468,312, filed on May 5, 2003. Provisional application No. 60/473,144, filed on May 22, 2003. Provisional application No. 60/495,024, filed on Aug. 14, 2003. Provisional application No. 60/505,652, filed on Sep. 23, 2003. Provisional application No. 60/510,781, filed on Oct. 11, 2003. Provisional application No. 60/529,464, filed on Dec. 11, 2003. Provisional application No. 60/536,177, filed on Jan. 12, 2004. Provisional application No. 60/560,757, filed on Apr. 7, 2004.

Publication Classification(51) **Int. Cl.**
C12Q 1/70 (2006.01)
C07H 21/04 (2006.01)
C12N 15/86 (2006.01)
C07K 14/165 (2006.01)
(52) **U.S. Cl.** **435/5**; 435/69.3; 435/456;
435/325; 530/350; 536/23.72(57) **ABSTRACT**

An outbreak of a virulent respiratory virus, now known as Severe Acute Respiratory Syndrome (SARS), was identified in Hong Kong, China and a growing number of countries around the world in 2003. The invention relates to nucleic acids and proteins from the SARS coronavirus. These nucleic acids and proteins can be used in the preparation and manufacture of vaccine formulations, diagnostic reagents, kits, etc. The invention also provides methods for treating SARS by administering small molecule antiviral compounds, as well as methods of identifying potent small molecules for the treatment of SARS.